

REMARKS/ARGUMENTS

Claims 1, 6-30, 40, and 42-50 are pending in this application. By this Amendment, Claims 1, 6-8 and 46 are amended. Reconsideration in view of the above amendments and the following remarks is respectfully requested.

Except as indicated otherwise in the remarks set forth below, the amendments are made for the purpose of correcting informalities pointed out by the Examiner or improving the clarity of the claims, and are not required to overcome prior art. No new matter is added.

35 USC § 102 CLAIM REJECTION

Claims 1, 10, 13, 14, 17, 19-21, 25-29, 40 & 42-45 stand rejected under 35 U.S.C. 102(e) over Kittelsen et al. (U.S. Patent No. 6,691,710). This rejection is respectfully traversed, for at least the reasons set forth below.

The Examiner asserts that Kittelsen discloses a base member having a generally U-shaped form corresponding to the outline of a jaw of a user, the base member defining at least one channel within which an upper or lower row of teeth of a user can be received (76, 86). With respect, applicant does not understand as to which of the four components of the Kittelsen guard the Examiner is referring to as the "base member." Applicant respectfully submit that Kittelsen does not disclose a base member having a teeth receiving channel or compressible channels or spacings that absorb shock, in combination with a teeth engaging element wherein the base member has a greater rigidity than the teeth engaging element, as recited in Claim 1.

Kittelsen describes an at least four layer mouthguard. Layer 1 is a non-softenable framework and is identified by reference numeral 86 (column 4, line 52). This layer is U shaped

but does *not* define at least one channel within which an upper or lower row of teeth can be received. Layer 86 has occlusal pad *plates* 92;

Layer 2 is a “very hard and durable” bite plate or reverse wedge 106 (see column 5, lines 20-21). It is neither U shaped nor has a channel. Layer 3 comprises traction pads 114 formed from an elastomeric material. This material deforms so as to cushion the teeth of the lower jaw (see column 5, lines 42054). Layer 3 has a U shape, but does not have channels for receiving a row of teeth;

Layer 4 comprises an encapsulation material 170 that is softenable and forms teeth receiving channel 178 as well as the base 76 of the mouthguard (see column 6, lines 26-28). It is this layer that is user moldable (see column 7, lines 25-33). Although Kittelsen uses the term “base”, Applicant submits that this term is used in a distinct manner to that used in the present claims. Kittelsen uses “base” to refer to the lower part of the guard, whereas the present claims define the base as being a member of greater rigidity than the teeth engaging element and having a U shaped form and at least one channel for receiving a row of teeth of a user.

In light of the above, Applicant respectfully disagrees that reference numerals 76 and 86 refer to a base member as claimed. Applicant further submits that none of the layers as described by Kittelsen, have each of the features of the claimed base.

The Examiner refers to the shock absorption means comprising one or more air channels defined in the base member (92, 94, 114, 177). From this, Applicant assumes that the Examiner is now referring to the framework 86 as being the same as the claimed base member. However, as explained above, the framework does not have teeth receiving channels. In any case, the

spacings 94 do not operate to absorb impact. These spacings are index openings that allow knob projections 116 of the traction pads 114 to pass through aperture 110 in the bite plate 108 and lock the bite plate framework together (see column 6 lines 7-14). Openings 117 are in the fourth layer and are cut outs to permit exposure of the traction pads.

For the purpose of clarification only, Claim 1 has been amended to define the spacings or air channels as being compressible in order to absorb impact shock.

In summary, Kittelsen does not disclose a base member having the features of a teeth receiving channel or compressible channels or spacings that absorb shock, in combination with a teeth engaging element wherein the base member has a greater rigidity than the teeth engaging element. Thus, Kittelsen does not anticipate Claim 1. Claims 10, 13, 14, 17, 19-21, 25-29 depend from Claim 1 and are also believed to be allowable over Kittelsen for at least the reasons discussed above. Applicant notes that Claim 10 also depends from claims 7 and 8, which stand rejected under a combination of references.

Regarding Claim 40, the Examiner states that Kittelsen discloses a base member (76, 86) for an oral appliance for placing in the mouth of a user, having a generally U-shaped form corresponding to the outline of a jaw of a user, the base member defining at least one channel (278) within which an upper or lower teeth of a user may be received, the base member further comprising shock absorbing means (114) taking the form of a predesignated compressible sections in order to substantially absorb impact shock. For the reasons given above, applicant disagrees that Kittelsen describes a base member as defined in claim 40. Further, the asserted shock absorbing means 114 are not disclosed in the same member that defines the teeth engaging

channels. In other words, compressible sections cannot be considered to form part of a base member of greater rigidity than the teeth engaging element. Instead, the compressible sections asserted as the shock absorbing means are the elastomeric, rubbery traction pads 114 that are formed by layer 3. Thus claims 40 and 42-45 are not anticipated by Kittelsen.

For the reasons discussed above, withdrawal of the rejection of Claims 1, 10, 13, 14, 17, 19-21, 25-29, 40 & 42-45 under 35 U.S.C. 102(e) is respectfully requested.

35 USC § 103 CLAIM REJECTIONS

Kittelsen et al. and Kittelsen et al.

Claims 6-8, 15, 16 and 30 stand rejected under 35 U. S. C. 103(a) over Kittelsen et al. (U.S. Patent No. 6,691,710) in view of Kittelsen et al. (U.S. Patent No. 5,152,301). This rejection is respectfully traversed, for at least the reasons set forth below.

The Examiner asserts that all of the component parts of a guard as defined in these claims are known in Kittelsen '710 and Kittelsen '301. For the reason referred to above, Kittelsen ('710) fails to disclose a guard as defined in claim 1. In particular, Kittelsen '710 does not disclose a base member having a teeth receiving channel or compressible channels or spacings that absorb shock, in combination with a teeth engaging element wherein the base member has a greater rigidity than the teeth engaging element, as recited in Claim 1. Thus, the component parts of Claims 6-8, 15, 16 and 30 are not known in Kittelsen '710. Kittelsen '301 does not teach this feature missing in Kittelsen '710. Thus, the combination of Kittelsen '710 and Kittelsen '301 would not have resulted in the claimed invention recited in Claim 1, from which Claims 6-8, 15, 16, and 30 depend.

The Examiner also asserts that it would have been obvious to modify the invention of Kittelsen '710 with shock absorption means comprising open air channels in the base member. Applicant submits that this would not have been obvious as even if the guard of Kittelsen '710 was modified to provide channels extending from an outer face to an inner face, that the limitations of any of the present claims would still not be met.

By reference to Figure 4 of Kittelsen '710, it may be seen that modifying the device such that index opening 94 extends from the outer face to the inner face would be quite impractical as this would prevent assembly of the guard. It is submitted that it cannot be obvious to modify a device in a manner that would clearly render the device incapable of serving its claimed function.

Alternatively, if it is the Examiner's view that the guard of Kittelsen '710 could be modified so as to introduce open channels extending through the body from the outer to the inner face, the Applicant submits that such a combination would not have been obvious and in any case even if such a combination was made that the features of Claim 6 would still not be met.

Open channels that extend from the outer to the inner face would have to be formed in either of traction pad 114 or bite plate 106. As discussed above, neither of these are base members as defined in the present claims.

Traction pad 114 cushions the teeth by virtue of its rubbery nature. Applicant submits that provision of channels in such a soft material would add little or nothing to the impact absorption qualities of the pad 144. In fact, applicant submits that providing channels may in fact decrease the shock absorption capabilities by virtue of the fact that, given the rubbery nature of the material, the channels would most likely collapse under load, thereby reducing the shock

absorbing properties. Thus, it would not have been obvious to place channels in the traction pad.

Turning now to the bite plate 106, the bite plate is not U-shaped and does not have teeth receiving channels such that forming channels in the bite plate would not provide the features of Claim 6.

In light of the above Applicant submits that claims 6-8, 15, 16 and 30 are patentable over Kittelsen '710 in view of Kittelsen '301. Withdrawal of the rejection of the claims under 35 U.S.C. 103 is respectfully requested.

Kittelsen et al., Kittelsen et al., and Adell

Claims 9, 12, and 46- 50 stand rejected over Kittelsen et al '710 in view of Kittelsen et al '301 and further in view of Adell (U.S. Patent No. 4,955, 393). This rejection is respectfully traversed, for at least the reasons set forth below.

The examiner admits that Kittelsen '301 and Kittelsen '710 fail to teach at least one frontal open channel arranged in a front section of the base member and asserts that it would have been obvious to further modify the Kittelsen '301 and Kittelsen '710 teachings with the frontal open channel taught in Adell to provide a shock absorbing means. However, for the reasons given above Applicant submits that combining the features of Kittelsen '301 and Kittelsen '710 is not obvious. Thus, even in view of Adell, claims 9 and 12 must also be considered to be patentable.

Moreover, assuming, *en arguendo*, that the references could be combined, the combination of Kittelsen '301 and Kittelsen '710 would not have resulted in a base member having a teeth receiving channel or compressible channels or spacings that absorb shock, in

combination with a teeth engaging element wherein the base member has a greater rigidity than the teeth engaging element, as recited in Claim 1 from which Claims 9 and 12 depend. Adell does not teach these features missing in Kittelsen '301 and Kittelsen '710, and thus a combination still would not have resulted in the above discussed features.

Claim 46 has been amended to clarify that the openings are compressible so as to absorb impact shock. As this feature is neither taught nor suggested in any of the citations, either alone or in combination, Claim 46 and its dependent Claims 47 - 50 are also believed to be allowable over the combination. Withdrawal of the rejection of the claims under 35 U.S.C. 103 is respectfully requested.

CONCLUSION

For at least the reasons set forth above, it is respectfully submitted that the above-identified application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are respectfully requested.

Should the Examiner believe that anything further is desirable in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,

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